

# BEST AVAILABLE COPY

## BIOACTIVE MATERIAL OR COMPOUND AND ENCAPSULATE AND GELATIN

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Liposome system for delivery of drugs, vitamins, hormones and peptides

Patent Assignee: BIOZONE LAB INC (BIOZ-N)

Inventor: KELLER B C

Number of Countries: 022 Number of Patents: 003

Patent Family:

| Patent No  | Kind | Date     | Applicat No  | Kind | Date     | Week     |
|------------|------|----------|--------------|------|----------|----------|
| WO 9911242 | A1   | 19990311 | WO 98US18475 | A    | 19980904 | 199919 B |
| AU 9892216 | A    | 19990322 | AU 9892216   | A    | 19980904 | 199931   |
| EP 1009383 | A1   | 20000621 | EP 98944753  | A    | 19980904 | 200033   |
|            |      |          | WO 98US18475 | A    | 19980904 |          |

Priority Applications (No Type Date): US 9757819 A 19970904

Patent Details:

| Patent No | Kind | Lan Pg | Main IPC | Filing Notes |
|-----------|------|--------|----------|--------------|
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| WO 9911242 | A1 | E 15 | A61K-009/127 |  |
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Designated States (National): AU CA JP

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU

MC NL PT SE

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| AU 9892216 | A | A61K-009/127 | Based on patent WO 9911242 |
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| EP 1009383 | A1 | E A61K-009/127 | Based on patent WO 9911242 |
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Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LI

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Abstract (Basic): WO 9911242 A1

NOVELTY - Liposome system for oral, intraocular, intranasal, rectal or vaginal delivery of materials having poor oral solubility, and poor gastrointestinal absorption.

DETAILED DESCRIPTION - Liposome capsule dosage unit comprises liposomes containing a biologically active material enclosed within a capsule.

USE - For delivery of biologically active materials such as drugs, nutritional supplements, vitamins, minerals, enzymes, hormones, proteins and polypeptides.

ADVANTAGE - The system is especially suited for delivery of materials with poor oral solubility, which are not absorbed or are poorly absorbed from the gastrointestinal tract or materials which have conventionally been given by an invasive route.

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Technology Focus:

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred liposomes: The liposomes comprise any bilayer forming lipid including phospholipids, sphingolipids, glycosphingolipids and ceramides. The biologically active material is selected from: drugs, nutritional supplements, vitamins, minerals, enzymes, hormones, proteins or peptides, preferably CoQ10, vitamin B12, vitamin E or L-carnitine.

Preferred capsule: The capsule comprises a soft gel capsule, preferably water tolerant, especially one composed of two pieces (claimed). A less water tolerant capsule can be used if the liposomes are dehydrated prior to placement within the capsule.

Preparation: The lipid capsule is prepared by incorporating a pre-liposome formulation containing bioactive material (optionally